

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Algebra 2/Trig: Quadratic Inequalities (day 1)

DO NOW

Solve for  $x$ :  $4^{2x-3} = \left(\frac{1}{2}\right)^{3x}$

Write the solution set of each inequality in set builder, and interval notation.

1)  $x^2 + 5x + 6 < 0$

$$2) \ x^2 - 3x + 2 > 0$$

$$3) \ x^2 > 12 - x$$

$$4) \ x^2 \geq 2x$$

Let's list the steps necessary to solve a quadratic inequality:

Practice: Write the solution set of each inequality in set builder, and interval notation.  
(work must be done on a separate sheet of paper)

1)  $2x + 24 - 2x^2 < 0$

2)  $8x - x^2 \leq 0$

3)  $x^2 + 5x - 6 > 0$

4)  $h^2 - 7h + 10 < 0$

5)  $x^2 - 8x - 15 \geq 5$

6)  $x^2 \leq 6x - 5$

7)  $h^2 - h < 6$

8)  $2x^2 - 8x + 8 > 0$

9)  $-x^2 + 35 \geq -2x$

10)  $-x^2 \geq 5x$